# Converged Interconnect Network Solutions

## for MultiService Operators (MSOs)

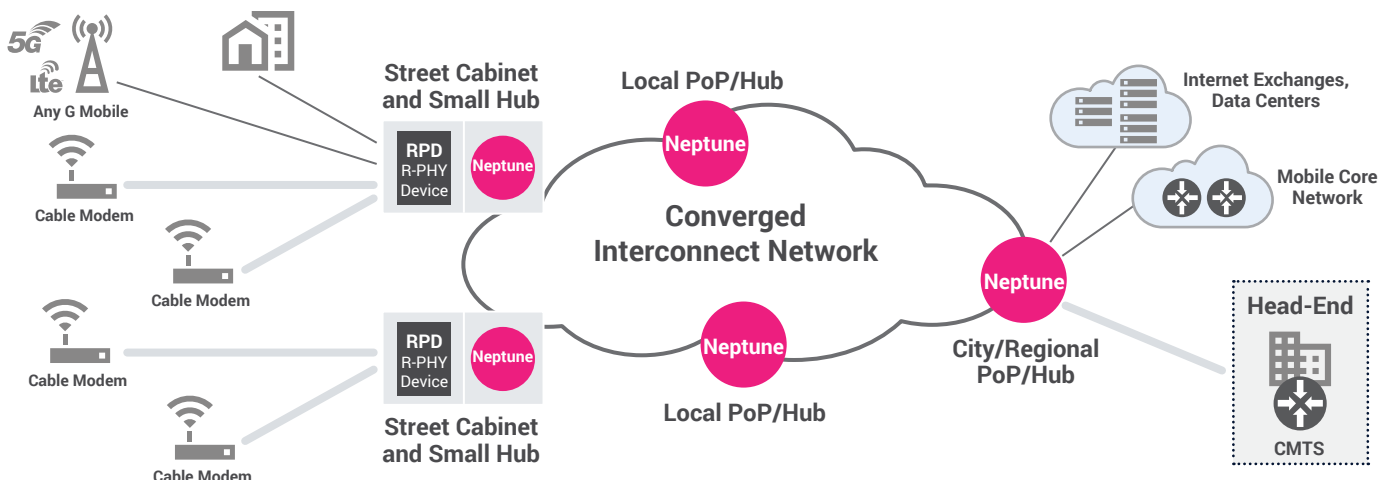## Multiservice Packet Transport Optimized for Cable Operators

With the widespread deployment of new digital technologies for cable access, such as CCAP and Remote PHY, cable operators have the opportunity to move from separate broadband and cable delivery networks to a converged interconnect network (CIN). CIN allows the consolidation of all cable, broadband, and business services onto a single transport platform and prepares the path for evolution to a distributed access architecture (DAA). With streamlined network architectures and operations simplification, CIN offers greatly reduced costs, improved customer experience, and a platform for launching new, high-value services, including 5G backhaul.

Ribbon uses its Neptune portfolio and advanced Muse software suite to provide an agile, multiservice packet transport platform for CIN. Neptune's unique Elastic MPLS functionality provides the ability to choose the best transport technology for each of today's services and an easy, programmable evolution path to DAA. In addition, Ribbon's solutions are deployable in the physical locations used by cable operators, from cable node/street cabinet to head-end.

| **Multiservice** | **Deployable Where Needed** | **Simplified Operations** |
|---|---|---|
| delivers integrated packet transport for all services | from cable node/street cabinet to head-end | with comprehensive, intuitive management |



**5G** **Lte** **Any G Mobile**

**Cable Modem**

**Cable Modem**

**Cable Modem**

**Cable Modem**

**Street Cabinet and Small Hub**

**RPD R-PHY Device** **Neptune**

**RPD R-PHY Device** **Neptune**

**Street Cabinet and Small Hub**

**Local PoP/Hub** — **Neptune**

**Converged Interconnect Network**

**Neptune** — **Local PoP/Hub**

**City/Regional PoP/Hub** — **Neptune**

**Internet Exchanges, Data Centers**

**Mobile Core Network**

**Head-End** — **CMTS**

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## Ribbon's Programmable, Multiservice Transport

| Your Challenges | Our Solutions |
|---|---|
| **Flexible multiservice box to support multiple service types today and for the future** | **Multiservice platform**<br>Ribbon's Neptune product line provides a true multiservice platform, offering a unified packet aggregation network able to support business, residential, and mobile services, including:<br>• Elastic MPLS capabilities to support IP/MPLS, MPLS-TP, and Ethernet all from a single platform and to stitch between each of these domains as required.<br>• Simple, flexible, high-capacity (nx100G), long-range interfaces provide the opportunity to reduce the number of core nodes and sites.<br>• Optimized functionality for services having specialized transport needs, such as backhaul, video, and synchronization.<br>• MPLS-TP for deterministic service delivery.<br><br>**Future proof**<br>Elastic MPLS provides a future-proof architecture, allowing existing services to be easily migrated to a new packet network and new service types and technologies that will be supported as they become available:<br>• Market-leading, dynamic transport capabilities make evolution to DAA straightforward.<br>• 5G mobile backhaul, with software-enabled features already available within the CIN solution.<br>• TDM-to-packet migration, with field-proven processes, tools, and capabilities to make the move from TDM to packet straightforward. |
| **Support multiple deployment options** | **Ribbon's solution is designed to be equally well-matched for use in the street cabinet, small hub, small equipment room or the central office and head-end:**<br>• Compact architecture with high-density pluggable cards maximize the use of head-end equipment-room rack space.<br>• Low-power consumption reduces operations expenses.<br>**Optimized features for head-end deployment include:**<br>• Under 300mm deep with all-front access.<br>• Compact, low-power, reduced-noise architecture.<br>• Hardened design with extended temperature range. |
| **Simplified operations** | **Ribbon provides a comprehensive, intuitive set of management tools for provisioning, managing, and monitoring the network:**<br>• Comprehensive, unified user operations for all services.<br>• Point-and-click operation for right-first-time service provisioning.<br>• Advanced software tools for rapid fault isolation.<br>• Network utilization and performance reports.<br>• Open, standards-based interfaces for easy integration into a wider ecosystem. |

## About Ribbon

Ribbon Communications (Nasdaq: RBBN) delivers communications software, IP and optical networking solutions to service providers, enterprises and critical infrastructure sectors globally. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility, including core to edge software-centric solutions, cloud-native offers, leading-edge security and analytics tools, along with IP and optical networking solutions for 5G. We maintain a keen focus on our commitments to Environmental, Social and Governance (ESG) matters, offering an annual Sustainability Report to our stakeholders. To learn more about Ribbon visit rbbn.com.

**Contact Us**    Contact us to learn more about Ribbon solutions.

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